

Abstract

A COMBINED COATING PROCESS COMPRISING MAGNETIC FIELD-ASSISTED, HIGH-POWER, PULSED CATHODE SPUTTERING 5 AND AN UNBALANCED MAGNETRON

A PVD process for coating substrates, wherein the substrate is pre-treated in the vapour of a pulsed, magnetic field-assisted cathode sputtering operation, and during pre-treatment a magnetic field
10 arrangement of the magnetron cathode type, with a strength of the horizontal component in front of the target of 100 to 1500 Gauss, is used for magnetic field-assistance, and after pre-treatment further coating is effected by means of cathode sputtering and the power density of the pulsed discharge during pre-treatment is greater than 1000 W.cm^{-2} .